



TP Mortar

*Polymer-Modified, Feather-to-3", Repair Mortar
w/ Ferrolok™ Penetrating Corrosion Inhibitor*

DESCRIPTION

TP Mortar is a one-component, dry polymer-modified blend of portland cement, selected aggregates and proprietary admixtures designed for repairs from feather edge to 3" in interior and exterior applications. **TP Mortar** develops a tenacious bond to concrete surfaces and will accept foot traffic in 10 to 12 hours. **TP Mortar** offers the additional benefit of Ferrolok™, a penetrating corrosion inhibitor.

USES

TP Mortar is ideal for a wide variety of concrete surface repairs.

- Precast concrete products, tilt-up panels, curbs, steps, columns, sidewalks, driveways, concrete walls
- Refinish old, horizontal, concrete and masonry surfaces
- Thin resurfacing of spalled, older concrete
- Fill in pits, voids and defects in concrete and masonry

BENEFITS

- Thermal expansion similar to concrete
- Color: Consistent color match for concrete
- High bond, compressive strengths
- High flexural tensile strengths
- Interior and Exterior applications
- Dry Polymer Modified: Just add water
- Non-Corrosive: Enhanced with Ferrolok™
- Consistent: Strict Quality Control testing and standards

SURFACE PREPARATION

All surfaces in contact with **TP Mortar** shall be free of dirt, oil, grease, laitance and other contaminants that may act as bond-breakers. All unsound concrete should be removed to ensure a good bond. Smooth, dense surfaces need to be mechanically abraded to provide necessary bonding requirements. Mechanically prepare the substrate to a minimum CSP 5 following ICRI Guideline 310.2R to allow proper bonding. ACI recommends that the area to be patched should be saturated for 24 hours before placement. Remove any standing water. Surface should be saturated surface dry (SSD). For best results, scrub some of the mixed components into the prepared surface. Do not allow scrub coat to fully dry before placement. Always apply a test patch. Maintain contact areas between 40°F (4°C) and 90°F (32°C) prior to repair and during initial curing period.

MIXING

For best results, use a mechanical mixer with rotating blades. Pre-wet mixer and empty excess water. Place 4-5 quarts of cool, clean potable water per 50 lb bag in mixer, depending on desired consistency being plastic or flowable, then add dry material. Mix on low RPM for a total of 3 to 5 minutes to achieve desired consistency. Mix only enough material that can be placed within working time. Do not blend excess water as this will cause bleeding and segregation. Do not use any other admixtures or additives.

PLACING

TP Mortar should be placed upon completion of mixing. Place material consistently, avoiding any air entrapment. Trowel material onto the surface to be repaired, ensuring all pores and voids are filled. Force material against edge of repair, working away from center. After leveling, the patch can be troweled, brushed or broomed to the desired finish. When material has reached the proper set, it can be shaved, shaped or molded with a steel trowel. Multiple lifts can be applied. Each lift should be applied no more than 3" in depth. Profile or roughen each lift to ensure a good bond. If placing in a single lift greater than 3" in depth, **TP Mortar** must be extended by up to 30%, by weight, with clean, washed and dried 3/8" (1 cm) pea gravel. Screed or float to finished elevation.

FINISHING AND CURING

Follow standard ACI curing practices. Exposed surfaces should be cured with a membrane forming compound such as **US SPEC Maxcure Resin Clear, Hydrasheen 15% or Hydrasheen 30%**.

STORAGE

Normal cement storage and handling practices should be observed. Store material in an interior, cool, dry place. Shelf life is one year in original, unopened container.

LIMITATIONS

In addition to limitations already mentioned, please note the following. Do not apply when the surface or ambient temperature is below 40°F (4°C) or when the temperature is expected to fall below 40°F within 48 hours. Do not apply over surfaces that are frozen or contain frost. Do not apply over any active faults or cracks in the substrate without addressing any movement that may occur. Allow concrete to fully cure for 28 days before use of this product. Setting time will speed up in hot weather and slow in cold weather. At 73°F (4°C) working time is approximately 15 minutes when mixed with 4 quarts of water and approximately 30 minutes when mixed with 5 quarts of water. For hot and cold weather applications, contact your US SPEC manufacturer's representative.

Packaging: 50 lb (22.7 kg) bag, 63 bags per pallet



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PHYSICAL PROPERTIES

All Physical Property testing performed in laboratory conditions of 73°F (22.8°C) ± 3°F (-16°C) and a relative humidity no less than 50% unless otherwise determined by the test method or specification. All results represent **TP Mortar** with 5.0 qts water unless listed otherwise. Tests are conducted under standardized conditions for comparative purposes, and results may not be representative of performance under field conditions.

Property and Test Method	Results			
Compressive Strength ASTM C109	A - Flowable 5.0 qts	B - Plastic 4.0 qts		
	3 Hours	1,800 psi (12.41 MPa)	2,300 psi (15.85 MPa)	
	1 Day	2,700 psi (18.61 MPa)	3,200 psi (22.06 MPa)	
	3 Days	3,200 psi (22.06 MPa)	3,600 psi (24.82 MPa)	
	7 Days	3,500 psi (24.13 MPa)	4,000 psi (27.57 MPa)	
	28 Days	3,700 psi (25.51 MPa)	4,100 psi (28.26 MPa)	
Rate of Set @ 75°F ASTM C266	Working Time	Initial	Final	
	A - Flowable 5.0 qts	:30	:50	
	B - Plastic 4.0 qts	:15	:35	
Actual times may vary due to application thickness and curing temperatures.				
Flexural Strength ASTM C78	7 Days	28 Days		
	800 psi (5.51 MPa)	1,200 psi (8.27 MPa)		
Density ASTM C138	A Flowable	120 lb/ft ³ (1,922 kg/m ³)		
	B Plastic	123 lb/ft ³ (1,970 kg/m ³)		
Length Change ASTM C157	Consistency A Flowable	Age 28 Days Air	% Length Change Air (-)0.03%	
		28 Days Water	Water (+)0.00%	
	B Plastic	28 Days Air	Air (-)0.02%	
		28 Days Water	Water (+)0.00%	
Modulus of Elasticity ASTM C469	1.76 x 10 ⁶ @ 28 days (12.15 Gpa)			
Scaling Resistance of Concrete Surface Exposed to Deicing Chemicals (ASTM C672): Pass 25 cycles				
Bond Strength ASTM C882	7 Days	28 Days		
	1,100 psi (7.58 MPa)	1,500 psi (10.34 MPa)		
Chloride Ion Content ASTM C1152 / C1218	Water Soluble	Acid Soluble		
	.003/ .007	.011/ .027		
Flow ASTM C1437	Consistency	5 Minutes	15 Minutes	
		A Flowable	146%	102%
		B Plastic	48%	28%
Coefficient of Thermal Expansion CRD C39	7.2 x 10 ⁻⁶ in/in°F (12.6 x 10 ⁻⁶ cm/cm°C)			

REGULATORY

Read and follow application information, precautions and Material Safety Data Information.

Right-to-know

This product contains Portland Cement (CAS#65997-15-1) and Crystalline Silica (CAS# 14808-60-7)

HMIS

Health 1, Fire 0, Reactivity 0

Prop 65

Warning! This product contains Crystalline Silica, a chemical known to the State of California to cause cancer or reproductive toxicity.

VOC Content

0 g/L

CAUTION

EYE AND SKIN IRRITANT

Contains Portland Cement (CAS# 65997-15-1) and Crystalline Silica (CAS# 14808-60-7). Do not allow contact with eyes or skin. Avoid breathing dust - silica may cause serious lung problems. There is limited evidence silica is a carcinogen. The use of gloves, goggles, dust masks and other protective clothing is recommended. If cement or sand particles get into eyes, rinse immediately with clean water and seek prompt medical attention.

TECHNICAL SERVICE

Contact your US SPEC manufacturer's representative for the most current product information.

US MIX Co.

112 South Santa Fe Drive

Denver, CO 80223

Tel: 303.778.7227 Fax: 303.722.8426

Web Site: www.usspec.com

NOTICE OF LIMITED WARRANTY US MIX Co. (manufacturer) warrants to buyer that this product at the time and place of shipment is of good quality and conforms to the manufacturer's specifications in force on the date of manufacture when used in accordance with the instructions hereon. Manufacturer cannot warrant or guarantee any particular method of use, application or performance of the product under any particular condition. This limited warranty cannot be extended or amended by manufacturer's sales, people, distributors or representatives or by any sales information, specifications of anyone other than the manufacturer. Liability under this warranty is expressly limited to refund of the purchase price. See product packaging for complete limitation of warranties and liability.

Yield: 50 lbs (22.7 kg) will fill approximately 0.43 ft³ (0.012 m³) when 4.0 qts mixing water is used.